

# **EVSE Framework**

**Based on Final EVSE Committee Report to  
BOD**

Response to Past-President Ask

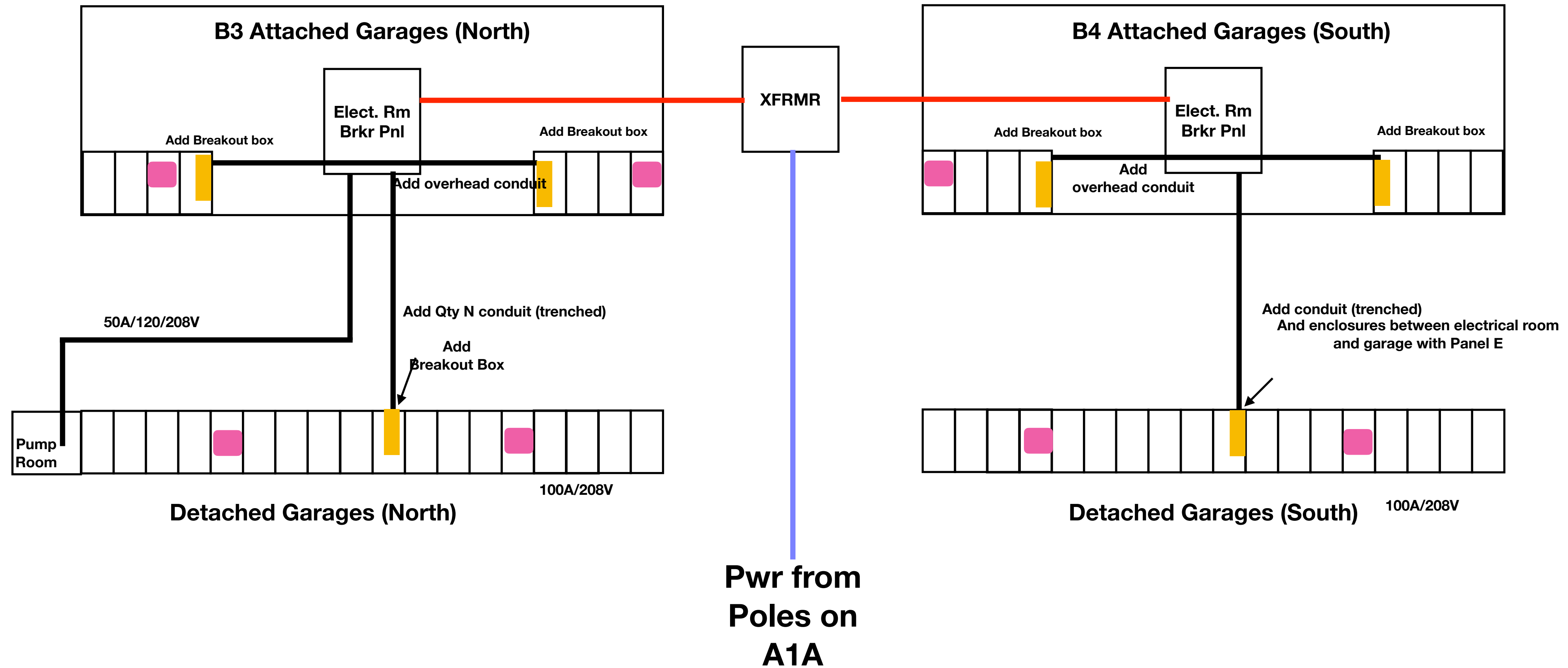
# Charter (from BoD President)

1. **Task 1:** Recommendations for Level 1 Charging (Committee Recco: Keep as is, No Cost to Association)
  - A. When 2 or more charge off of the same outlet circuit, they will have to stop charging and find an alternative solution.
  - B. No current manner of audit is available to the Assoc. I.e. Owners can use common power without the knowledge of the Assoc.
2. **Task 2:** Recommendations for Shared Level 2 Charging Station (Committee Recco: This is not favored and will not likely be used by current owners). Install Cost estimate: Estimated \$4000 (+/- 1000)+ cost of charging station: Total Estimated \$8000-\$10000 per EVSE station
  1. Allocate one parking space on most north lot, or most south lot, or both.
  2. Install common power level-2 circuit from electrical room, via overhead conduit on catwalk ceiling, to outside wall of attached garage.
  3. Power needs are within current transformer capacity.
  4. Cost recovery: \$TBD initiation cost, TBD% surcharge on energy usage. (Ex. \$1000/35%: Payback in approx 3 yrs.)
  5. Becomes common property, perpetually maintained by the Association
  6. Needs financial management, tracking, insurance, policy and procedure document, access/conflict adjudication etc.
3. **Tasks 3:** Recommendations for Privately Installed Level 2 Charging Stations. See following slides
  1. Needs financial management, tracking, insurance, policy and procedure document.

# Plan: Recommended by Committee

- Assume FPL can supply the full 100A (125A Breaker in Elect. Room) to each Unit (as per existing design):
  1. **Electrical Room Infrastructure Installation.** Add Infrastructure (trays, conduit, enclosures, etc - no circuits or wiring) from Meter panel to breakout box on interior or exterior wall of the Electrical Room (supports all units)
    - A. Requires building power outage to connect conduits from tray to each meter.
  2. **Detached Garage Infrastructure Installation.** Add Infrastructure from electrical room to detached garage for each building - Install infrastructure for 208V 50A for 16 detached garages
    - B. Trench across the driveway between electrical room and nearest attached garage (the attached garage with Panel E)
    - C. Install conduits capable of supporting 16 circuits, backfill and repair driveway.
  3. **Attached Garage Infrastructure Installation. Add conduit from electrical room to each attached garage (supports 3 garage bays per garage - recall 1 bay allowed direct connection within the Unit).**
    - D. Install enclosures at electrical room and both attached garages
    - E. No circuits or wiring included.
- 4. Owners pay all electrician costs to add circuits from their Unit power (post meter, and post 125A breaker), and route cable from garage breakout box to their garage bay.
- 5. Owners pay a cost or fee to utilize conduit (which is common property and installed by the Association)
- 6. Pros:
  - A. Association manages the easements to avoid ad hoc approaches by individual owners at different times. It is not clear that the Association can guarantee one owner's plan will not block or increase cost of another owners plan.
  - B. Association costs partially re-funded for the benefit of ensuring a scalable solution without blocking or excessive trenching.
  - C. Each owner uses their own condo power - not common power - fits within current FPL power capacity
  - D. Each owner pays for their own EVSE electrical installation
  - E. Allows disparate EVSE solutions - rather than a common vendor with dynamic load balancing.
- 7. Cons:
  - A. Association refunds are not guaranteed
  - B. Each owner probably limited to 45A Level 2 Charging stations.

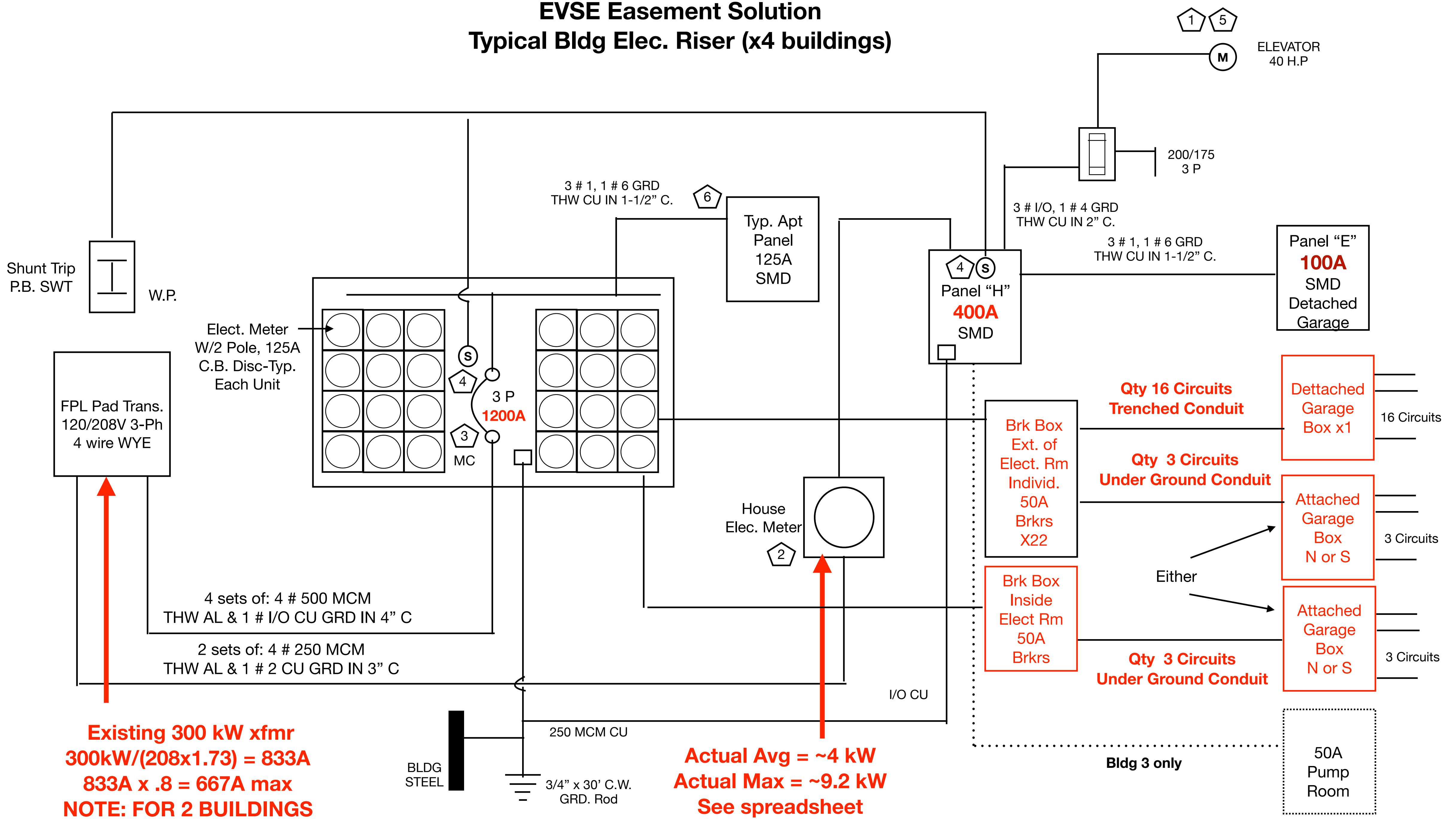
# Typical Two Buildings: Add Infrastructure to each garage (Easement items only). Owners pay for all other items req'd for EVSE



 Level 2 EVSE Installation

# EVSE Easement Solution

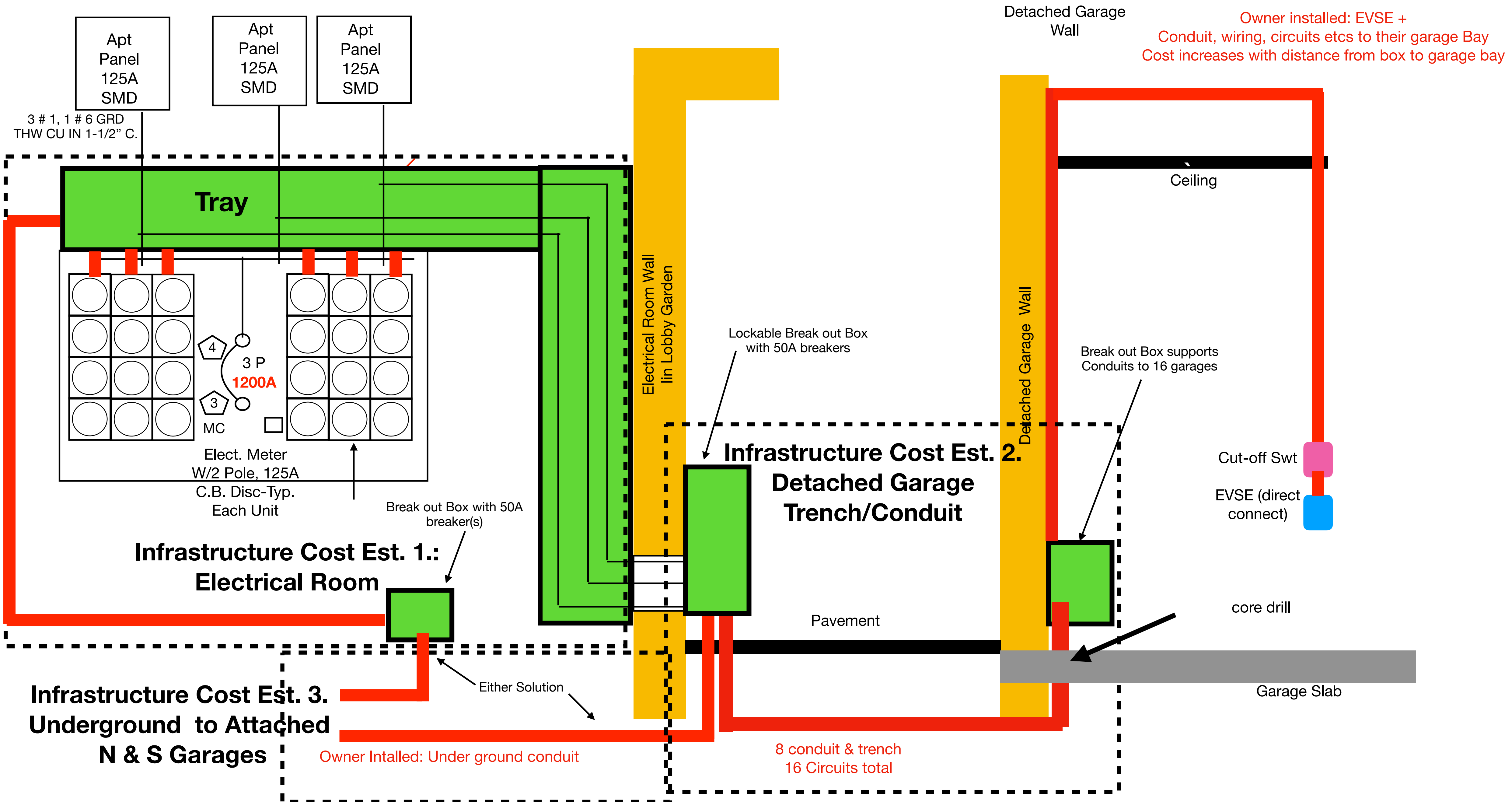
## Typical Bldg Elec. Riser (x4 buildings)



**Existing 300 kW xfmr**  
 $300\text{kW}/(208 \times 1.73) = 833\text{A}$   
 $833\text{A} \times .8 = 667\text{A max}$   
**NOTE: FOR 2 BUILDINGS**

**Actual Avg = ~4 kW**  
**Actual Max = ~9.2 kW**  
**See spreadsheet**

**Bldg 3 only**



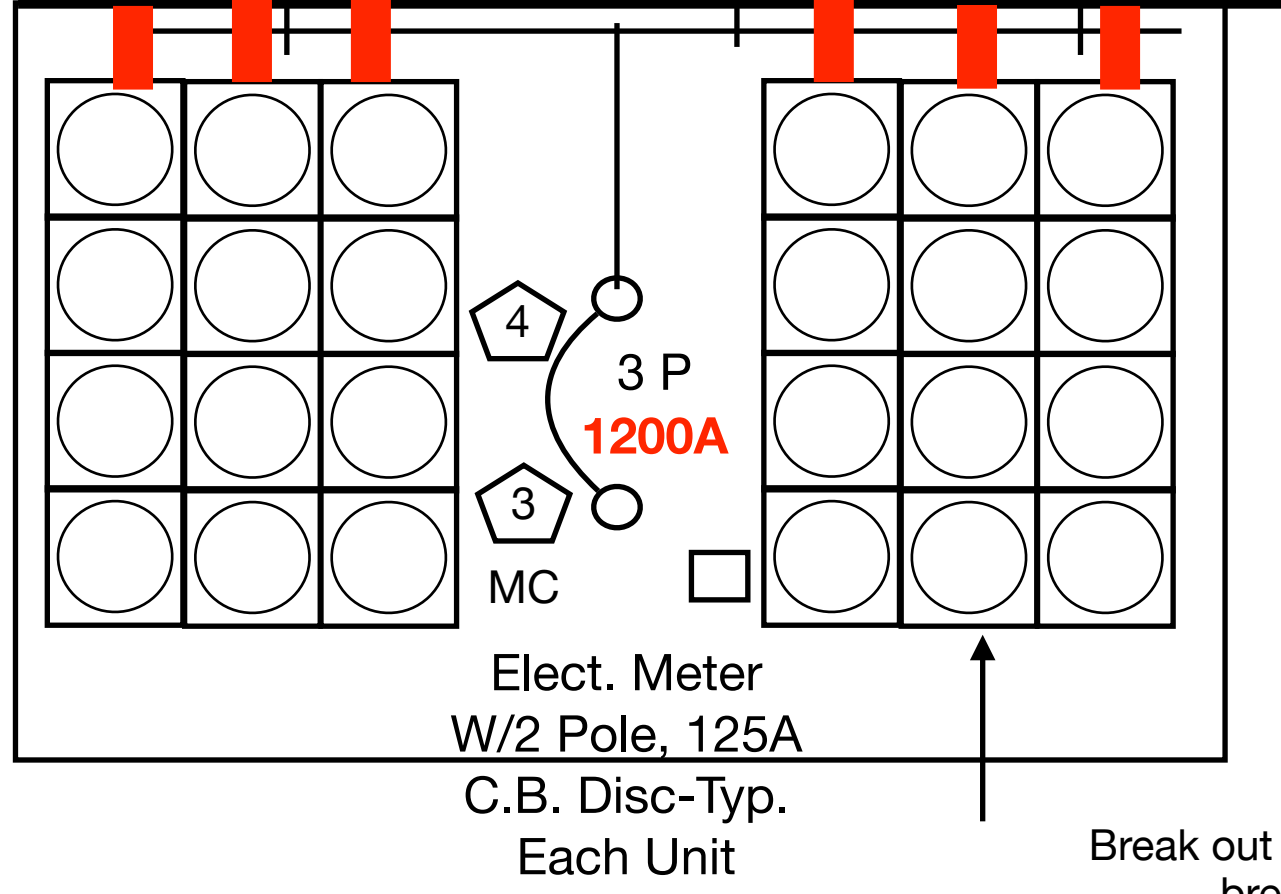
Apt Panel 125A SMD

Apt Panel 125A SMD

Apt Panel 125A SMD

3 # 1, 1 # 6 GRD THW CU IN 1-1/2" C.

Tray



Infrastructure Cost Est. 1.:  
Electrical Room

Electrical Room Wall in Lobby Garden

Lockable Break out Box with 50A breakers

Infrastructure Cost Est. 2.  
Detached Garage Trench/Conduit

Detached Garage Wall

Break out Box supports Conduits to 16 garages

Owner installed: EVSE + Conduit, wiring, circuits etc to their garage Bay  
Cost increases with distance from box to garage bay

Cut-off Swt

EVSE (direct connect)

core drill

Pavement

Garage Slab

Infrastructure Cost Est. 3.  
Underground to Attached N & S Garages

Owner Intalled: Under ground conduit

8 conduit & trench  
16 Circuits total